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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/637,082	08/11/2000	Scott A. Williams	0175-0284P	8126
2292	7590	01/02/2004	EXAMINER	
BIRCH STEWART KOLASCH & BIRCH			CHANG, VICTOR S	
PO BOX 747			ART UNIT	
FALLS CHURCH, VA 22040-0747			PAPER NUMBER	

1771

DATE MAILED: 01/02/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 09/637,082	Applicant(s) WILLIAMS ET AL. 	
	Examiner Victor S Chang	Art Unit 1771	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 04 August 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-62 is/are pending in the application.
- 4a) Of the above claim(s) 4,10,13,16,21-23,25-31 and 46-57 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-3,5-9,11,12,14,15,17-20,24,32-45 and 58-62 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 080403. 6) ☐ Other: _____

DETAILED ACTION

1. The Examiner has carefully considered Applicant's remarks filed on 8/4/2003, and reply to election of species requirement filed on 10/31/2003.
2. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.
3. Rejections not maintained are withdrawn.

Election/Restrictions

4. Applicant's election with traverse of Election of Species in reply filed 10/31/2003 is acknowledged. The traversal is on the ground(s) that "requirement for an Election of Species at such a late stage in prosecution is improper" (Remarks, page 2, second paragraph). This is not found persuasive because this application contains claims directed to the patentably distinct species of the claimed invention as set forth in section 1 of Paper No. 18. As such, Species C (claim 11) for imaging receiving layer, Species E (claims 12, 14, 15, 17-20 and 24), and generic claims 1-3, 5-9, 32-45 and 58-62 are elected claims, and claims 4, 10, 13, 16, 21-23, 25-31 and 46-57 are now withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention. It should be noted that if two or more independent and distinct inventions are claimed in a single application, the Examiner in an Office action will require the applicant in the reply to that action to elect an invention to which the claims will be restricted. Although such requirement will normally be made before any action

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on the merits; however, it may be made at any time before final action. See 37 CFR 1.142. As such, in view of the numerous claims in this application, and the present Office is non-final, the requirement is deemed proper and is therefore made FINAL.

Drawings

5. This application, filed under former 37 CFR 1.60, lacks formal drawings. The informal drawings filed in this application are acceptable for examination purposes. When the application is allowed, applicant will be required to submit new formal drawings. In unusual circumstances, the formal drawings from the abandoned parent application may be transferred by the grant of a petition under 37 CFR 1.182.

Claim Rejections - 35 USC § 112

6. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

7. Claims 1-3, 5-9, 11, 12, 14, 15, 17-20, 24, 32-45 and 58-62 are rejected under 35 U.S.C. 112, first paragraph, as based on a disclosure which is not enabling. A properly specified order of the layers is critical or essential to the practice of the invention, but not included in the claim(s) is not enabled by the disclosure. See *In re Mayhew*, 527 F.2d 1229, 188 USPQ 356 (CCPA 1976).

More particularly, Applicants' response filed 4/9/2003 arguing that "nowhere within the statue is there an explicit recitation that the scope of the claim, whether it is broad or narrow, adversely effects the distinctness of the claimed subject matter" (Remarks, page 5, second paragraph) has been carefully considered, but is not persuasive. The Examiner now repeats (see Paper No. 11, page 3) that in the absence of a properly specified layer order, the layers could be in any random order, which is clearly in excess of the enablement in the Specification, because the Specification only teaches that the PSA layer is coated onto the base, and the Adhesion Layer is coated onto the PSA layer, while optional opaque layers may be coated over the Adhesion Layer (Specification, page 3, lines 4-17). Appropriate correction is required.

Response to Amendment

8. Claims 1-3 and 5-8 are rejected under 35 U.S.C. 103(a) as being unpatentable over newly cited Laprade et al. (US 6099944).

Laprade's invention is directed to a decorative heat transfer label (Abstract). Referring to prior known art, Laprade teaches that it is conventional a heat transfer label comprises a paper sheet as temporary support, a release layer such as wax, and an ink design layer (column 1, lines 24-50). Additionally, it is known art that a layer of frosted material can be interposed between the ink design layer and a pressure-sensitive adhesive layer to provide a frosted aesthetic appearance (column 3, lines 43-67). It should be noted that since the ink design layer is the outermost layer, clearly the pressure sensitive layer is between the support and the ink design layer.

For claims 1, 5 and 8, Laprade lacks an express teaching of the chemical composition of the pressure sensitive adhesive (PSA) layer. However, pressure sensitive adhesive such as a suitable acrylic polymer is believed to be common and well known, as evidenced by the state of the art Mesek et al. (US 3920016), which is directed to a disposable diaper with fastening tab which can be releasably lightly bonded together (column 3, lines 56-60), and Mesek expressly teaches that suitable pressure sensitive adhesives for the fastening tab includes tacky acrylic polymers (column 4, lines 11-18). As to the T_g of the PSA being less than 0°C, it is also believed to be either inherently disclosed by Mesek for a PSA to be functioning at ambient temperature. Regarding the Adhesion Layer, clearly the conventional ink design layer and wax layer taught by Laprade reads on the instantly claimed Adhesion Layer, which is transferred and adhered to an article after the heat-transfer labeling process (column 1, lines 27-33). Finally, regarding the optional opaque layers in the independent claim 1, the Examiner notes that since they are optional, there is no requirement for the prior art to provide or account for them. As such, they do not constitute limitations in any patentable sense. See MPEP § 2106.

For claims 2-3, Laprade teaches an ink layer printed onto the protective lacquer layer, which comprises a solvent-soluble phenoxy resin that has been cross-linked by a melamine resin (Abstract). The Examiner notes that the protective layer reads on the image receiving layer, and its melting temperature of not less than 200°C is believed to be either inherently disclosed by its cross-linked chemical structure, or an obvious

optimization to one of ordinary skill in the art, motivated by the desire to obtain improved label durability.

For claim 6, Laprade teaches that it is well known that support of the prior art is a paper sheet as set forth above, and the Examiner notes that paper is inherently a cellulosic nonwoven web.

For claim 7, it is well known that a silicone film coating is commonly coated onto a paper support as release layer, note also as evidence the state of the art Brack (US 4218294), which is directed to a curable release coating composition (Abstract). Brack teaches that it is known that release surfaces of low adhesion are useful for transfer printing (column 1, lines 21-31), and the materials have good slip or release properties, are generally lipophilic, and can comprise waxes, silanes, siloxanes, silicones, fluorocarbons, and the like (column 1, lines 62-65).

9. Claims 9, 11, 12, 14, 15, 17-20, 24, 32-45 and 58-62 are rejected under 35 U.S.C. 103(a) as being unpatentable over Laprade et al. (US 6099944) in view of Kronzer (US 5798179).

For claim 9, Laprade lacks a teaching that the Adhesion Layer comprises a thermoplastic which melts in a range of from about 65°C to about 180°C and has a solubility parameter of at least about 19 (Mpa)^{1/2}. However, it is noted Kronzer's invention is directed to a printable heat transfer material (Abstract), and Kronzer discloses a heat-sealable layer which has exactly the same solubility parameter of at least about 19 (Mpa)^{1/2}, and melts in a range of from about 65°C to about 180°C (column 2, lines 37-48). As such, it would be obvious to one of ordinary skill in the art to

select a heat transfer material of Kronzer's to make a suitable Adhesion Layer. It should be noted that the selection of a known material based on its suitability for its intended use supported a *prima facie* obviousness determination. See MPEP § 2144.07.

For claim 11, Kronzer teaches the fourth layer (part of an image receiving layer) may include particles of a thermoplastic polymer. Desirably, the powdered thermoplastic polymer will be selected from the group consisting of polyolefins, polyesters, polyamides, and ethylene-vinyl acetate copolymers (column 7, lines 12-21).

For claims 14, 20, 24 and 36-37, it is noted that Kronzer discloses that the third layer (part of the image receiving and adhesive layer) may be a melt-extruded film, and other polymers which may be employed include polyesters, polyamides, and polyurethanes. Waxes, plasticizers, rheology modifiers, antioxidants, antistats, antiblocking agents, and other additives may be included as either desired or necessary (column 6, lines 43-59). Further, the Examiner takes Official notice that additives and emulsion polymer blends are commonly used for polymer property modification, in the absence of unexpected results, it would have been obvious to one skill in the art at the time the invention was made to include various additives and/or polymer blends in the formulation, motivated by desired thermal and physical properties, and by the expectation of success imparted by the prior art.

For claims 15, 17 and 34-35, it would have been obvious to one having ordinary skill in the art at the time the invention was made to select an ethylene acrylic acid dispersion polymer and film forming binder with T_g in the range of 65°C to about 180°C

to meet the typical temperature range of a heat setting operation. Further, it is common to select an elastomer emulsion and/or a polyurethane dispersion, having a Tg in the range of -50°C to 25°C, to adjust the overall Tg of a polymer blend, since it has been held to be within the general skill of worker in the art to select a known material on the basis of its suitability for the intended use as a matter of obvious design choice. *In re Leshin*, 125 USPQ 416.

For claims 18-19 and 40-45, although Laprade and Kronzer lack express teachings of the ratio of a polymer blend in the Adhesion Layer, since Kronzer essentially teaches the same polymer blend in the Adhesion Layer as set forth above, it is believed a suitable ratio of the polymer blend is either inherently disclosed, or an obvious optimization to one of ordinary skill in the art of Adhesion Layer, motivated by the desire to obtain an improved adhesion to the substrate. It has been held that where general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art. *In re Aller*, 105 USPQ 233.

Similarly, for claims 32-33 and 58, it is believed that a suitable amount of dry coat for adhesion and image receiving layers are either inherently disclosed, or an obvious optimization to one of ordinary skill in the art.

For claim 39, it is noted that Kronzer teaches that the fourth layer (part of an image receiving layer) may include particles of a thermoplastic polymer having largest dimensions of less than about 50 micrometers. Desirably, the particles will have largest dimensions of less than about 20 micrometers (column 7, lines 12-16).

Claim 38 essentially contains the same claimed elements as set forth above, as such it is also rejected for the reasons as set forth above.

For claims 59-60, it is noted that claims lack structural element other than the dependent upon claim 1, and they are clearly directed to the use of the heat-setting label of claim 1, as such they appear to be claims of use, which is improper and bears no patentable weight. The Examiner would like to suggest rewriting them as process of use claims, if there is proper support in the Specification.

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Victor S Chang whose telephone number is 703-605-4296. The examiner can normally be reached on 8:30 - 5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Terrel H Morris can be reached on 703-308-2414. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9310.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0661.

VSC

DANIEL ZIRKER
PRIMARY EXAMINER
GROUP 1300

1700

Daniel Zinker